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DSPACE 1.6 USAGE STATISTICS:
WHAT CAN IT DO FOR YOU?

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OUTLINE

- 1 - Introduction
- 2 - Usage Events
- 3 - Usage Statistics
- 4 - Extending Statistics
- 5 - Content & Usage Analysis Add-on Module



1 - INTRODUCTION

✦ Community Survey

- ✦ Highest rated feature request
- ✦ 36% of requests in survey

✦ Existing implementations available

- ✦ Database dependent
- ✦ Possible performance issues
- ✦ Not easy to install
- ✦ ...



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1 - INTRODUCTION

✦ @mire Contribution to DSpace 1.6

- ✦ Core of @mire's Content & Usage Analysis
- ✦ Logging usage events
 - ✦ in search index
- ✦ Querying usage events to provide statistics
 - ✦ On-the-fly queries instead of predefined reports
- ✦ For xmlui & jspui



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2 - USAGE EVENTS

✦ Usage events:

- ✦ Community homepage visits
- ✦ Collection homepage visits
- ✦ Item visits
- ✦ Bitstream downloads

✦ Data per usage event:

- ✦ Timestamp
- ✦ IP address
- ✦ Location: continent, country, city
- ✦ and much more ...



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2 - USAGE EVENTS



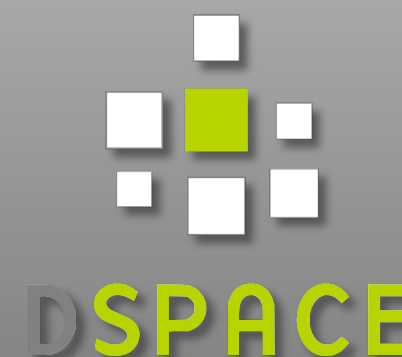
✦ Usage event logging

✦ Apache Solr

- ✦ Open source enterprise search platform from the Apache Lucene project
- ✦ New web application added to DSpace

✦ Performance

- ✦ Fast logging in search index
- ✦ Can easily be deployed on a separate server
- ✦ Advanced solutions for fast querying based on caching



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2 - USAGE EVENTS

- ✦ In-house storage of usage data:
 - ✦ No dependency on external services
 - ✦ availability, long-term support, ...
 - ✦ No privacy issues
 - ✦ Create your own Back-ups
- ✦ Storing original usage events
 - ✦ No limitations on views of the data
 - ✦ View usage data in detail
 - ✦ Full history available
 - ✦ Not only aggregated (e.g. per month)



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3 - USAGE STATISTICS

✦ Advantages

- ✦ Statistics are context-aware
 - ✦ Awareness of DSpace content hierarchy
 - ✦ Display most popular items per collection
 - ✦ All bitstreams per item
 - ✦ ...
- ✦ Fast updates
 - ✦ No monthly scripts
 - ✦ No delays in data availability



3 - USAGE STATISTICS

✦ Visualize impact of your repository

✦ Popular records in the spotlight

- ✦ Overview of your most popular items (per collection)
- ✦ Automatic linking to the most popular items

✦ Publishing statistical information

- ✦ Display usage information for current item
- ✦ many visits => important for many people => maybe also important to current visitor



3 - USAGE STATISTICS

✦ Report to your institution's management

✦ Visualize importance and impact of your repository:

✦ Display repository added value using statistical information

✦ Most popular segments:

✦ What repository content is considered most interesting to users

✦ Least visited segments:

✦ Detect repository content that requires improvement to increase the visibility and impact



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3 - USAGE STATISTICS

✦ Report to your institution

✦ Visualize importance and usage of repository:

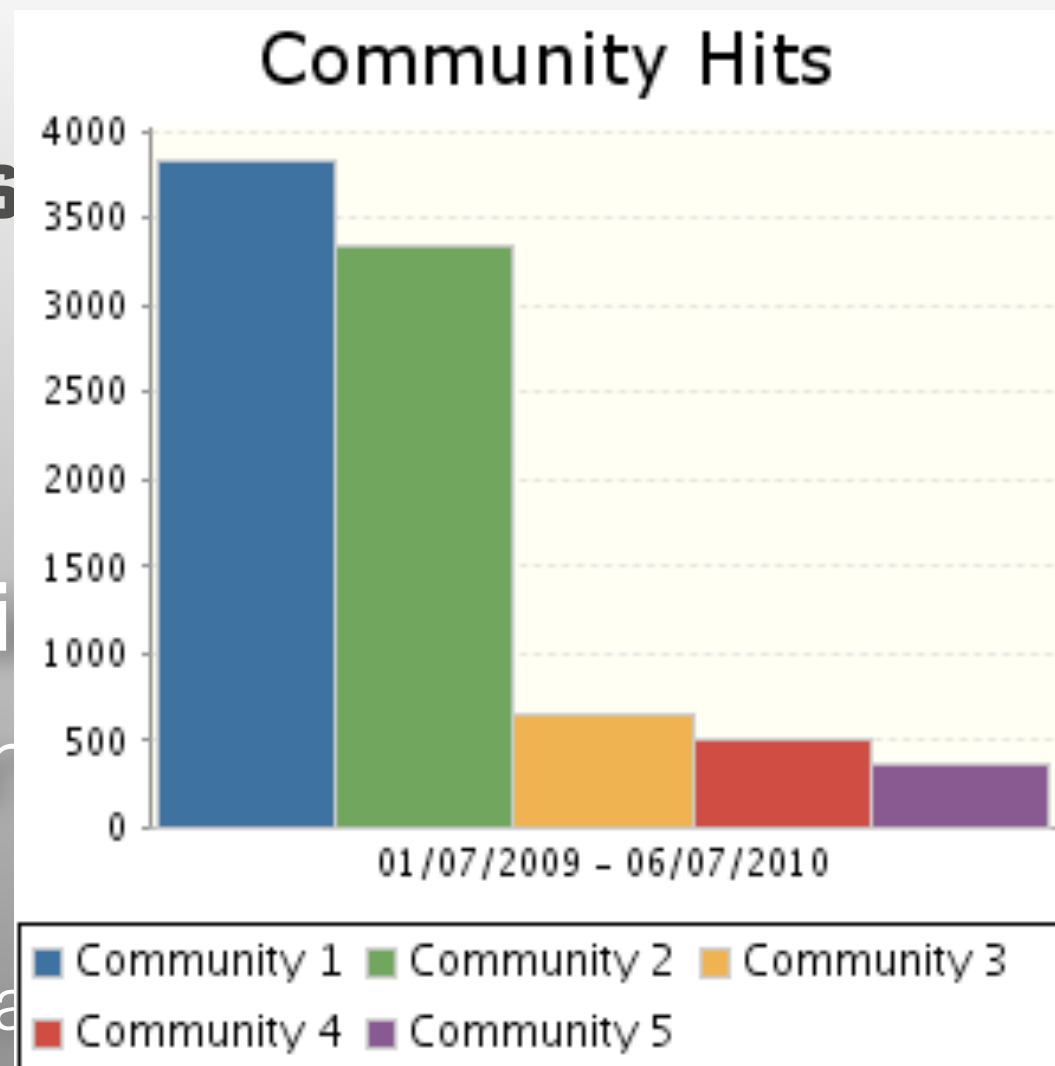
✦ Display repository added value

✦ Most popular segments:

✦ What repository content is considered most interesting to users

✦ Least visited segments:

✦ Detect repository content that requires improvement to increase the visibility and impact



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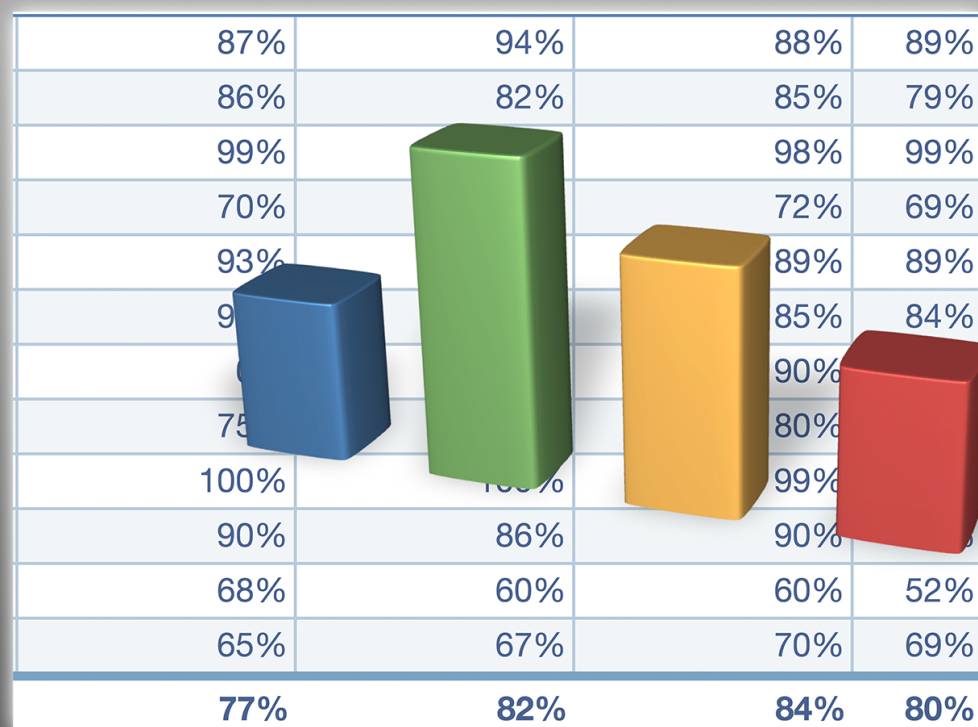
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Statistics Features

DEMO



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4 - EXTENDING STATISTICS

✦ Example extensions of the Statistics implementation

✦ Referrer

- ✦ Store referrer to visualize incoming links from other websites, and internal navigation

✦ Recommendations

- ✦ Build recommendations solution based on the concept of 'users who visited this item, also visited ...'



4 - EXTENDING STATISTICS

✦ Harvest Usage Data

✦ Goals

- ✦ Mining usage data from partner institutions
- ✦ Compare usage data amongst different institutions
- ✦ Construct cross-institution recommendations based on usage data

✦ Example set-ups

- ✦ NEE0
- ✦ PIRUS



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4 - EXTENDING STATISTICS

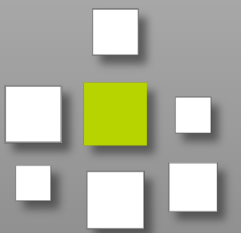
✦ Store popular searches

✦ Goals

- ✦ Display top searches within your repository
- ✦ Display relevant additional search terms to be included or excluded
- ✦ Rank search results based on usage by other visitors

✦ Requirements

- ✦ Store executed search terms
- ✦ Store relation amongst search terms
- ✦ Store relation between search terms and opened items



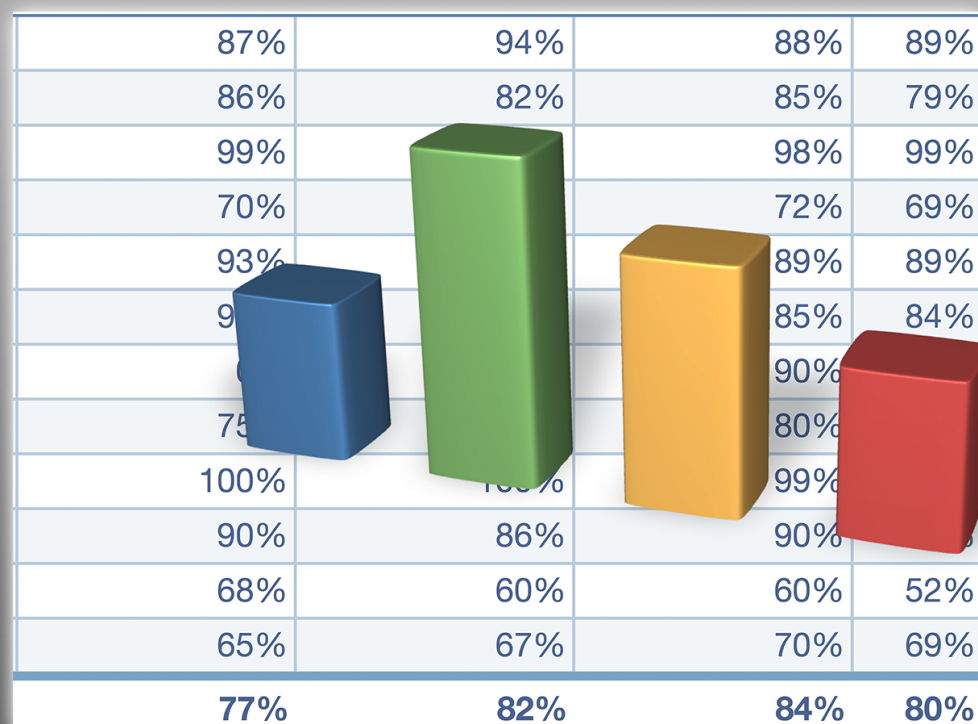
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Statistics Features

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5 - CONTENT AND USAGE

ANALYSIS MODULE



- ✦ **@mire proprietary CUA module**
 - ✦ Designed and developed by @mire
 - ✦ Module core contributed to DSpace 1.6
 - ✦ Same data logging
 - ✦ Improved interface



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5 - CONTENT AND USAGE ANALYSIS MODULE



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✦ Statlets

✦ Configurable display in repository

- ✦ Determine the displayed data
- ✦ Separate configuration for item, collection, community, repository homepage

✦ Graphs

- ✦ Generate various types of graphs, and integrate them in the display pages



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5 - CONTENT AND USAGE ANALYSIS MODULE



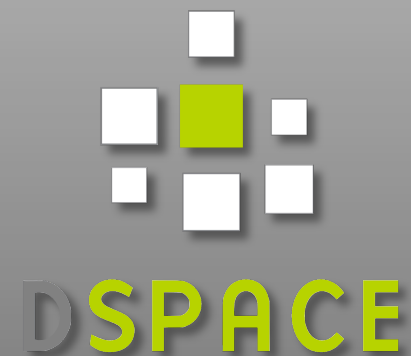
✦ Administrator interface

✦ Wide range of reports

- ✦ Created instantaneous in the web interface
- ✦ Configure type of report to be requested
- ✦ Fast access to results to verify the configuration
- ✦ Generate data in a few clicks

✦ View report as:

- ✦ Data Table
- ✦ Downloadable Spreadsheet
- ✦ Various Graph types



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5 - CONTENT AND USAGE ANALYSIS MODULE



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✦ Content analysis

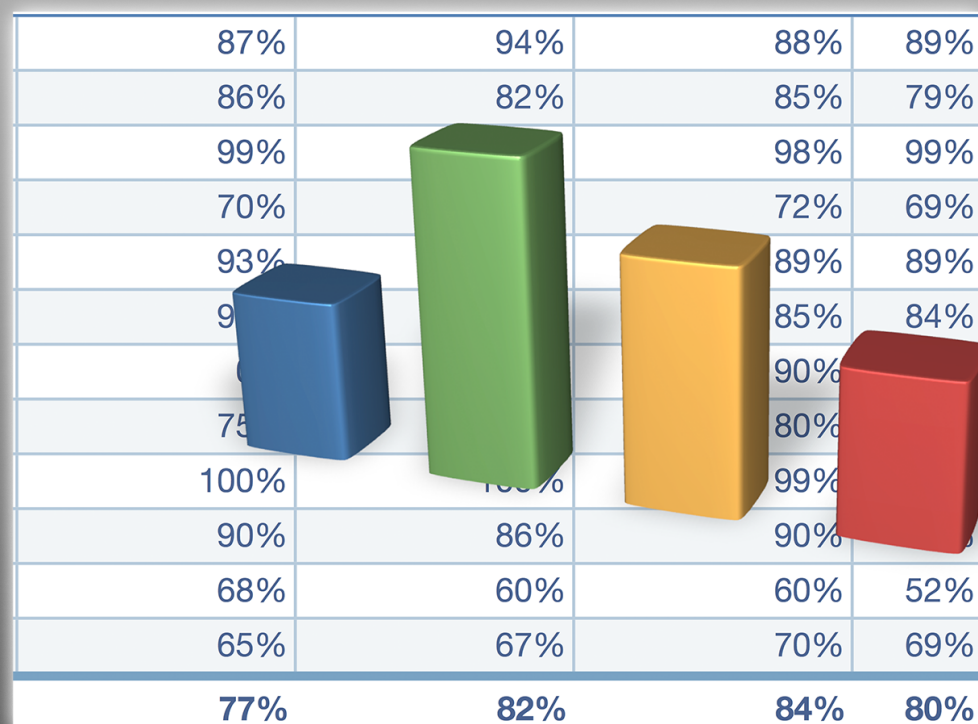
- ✦ Visualize repository growth
 - ✦ Display amount of records per year
 - ✦ Compare growth amongst various communities
- ✦ Visualize distribution
 - ✦ Display amount of records per type, language, ...



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Statistics Features

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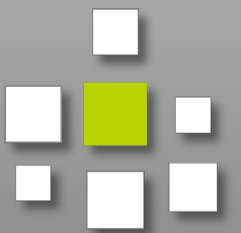
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THANK YOU



Questions?

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